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L Number	Hits	Search Text	DB	Time stamp
1	2	wo-2001057597-\$.did. or ep-1172694-\$.did. or us-2002169266-\$.did.	USPAT; US-PGPUB; EPO; JPO; DERWENT	2003/04/22 10:02
2	0	wo-2000046640-\$.did.	USPAT; US-PGPUB; EPO; JPO; DERWENT	2003/04/22 10:08
3	12	((("6440636") or ("6537726") or ("6479211"))).PN.	USPAT; US-PGPUB; EPO; JPO; DERWENT	2003/04/22 10:07
4	14	(wo-2001057597-\$.did. or ep-1172694-\$.did. or us-2002169266-\$.did.) (((("6440636") or ("6537726") or ("6479211"))).PN.)	USPAT; US-PGPUB; EPO; JPO; DERWENT	2003/04/22 10:07
5	0	wo-20000046640-\$.did.	USPAT; US-PGPUB; EPO; JPO; DERWENT	2003/04/22 10:08
6	2	jp-2000227658-\$.did.	USPAT; US-PGPUB; EPO; JPO; DERWENT	2003/04/22 10:08
7	16	((wo-2001057597-\$.did. or ep-1172694-\$.did. or us-2002169266-\$.did.) (((("6440636") or ("6537726") or ("6479211"))).PN.))	USPAT; US-PGPUB; EPO; JPO; DERWENT	2003/04/22 10:08
-	2	jp-2000227658-\$.did. ("20020187420").PN.	USPAT; US-PGPUB; EPO; JPO; DERWENT	2003/04/21 13:45
-	62	hydroxyadamantyl	USPAT; US-PGPUB; EPO; JPO; DERWENT	2003/04/21 15:47
-	53	hydroxyadamantyl and (photoresist resist)	USPAT; US-PGPUB; EPO; JPO; DERWENT	2003/04/21 15:48
-	77	BARCLAY-G BARCLAY-GEORGE BARCLAY-GEORGE-G BARCLAY-GEORGE-GERARD BARCLAY-G-G	USPAT; US-PGPUB; EPO; JPO; DERWENT	2003/04/21 15:28
-	82	BARCLAY-G BARCLAY-GEORGE BARCLAY-GEORGE-G BARCLAY-GEORGE-GERARD BARCLAY-G-G KAVANAGH-R KAVANAGH-ROBERT-J KAVANAGH-R-J	USPAT; US-PGPUB; EPO; JPO; DERWENT	2003/04/21 15:29
-	68	(BARCLAY-G BARCLAY-GEORGE BARCLAY-GEORGE-G BARCLAY-GEORGE-GERARD BARCLAY-G-G KAVANAGH-R KAVANAGH-ROBERT-J KAVANAGH-R-J) and (resist photoresist)	USPAT; US-PGPUB; EPO; JPO; DERWENT	2003/04/21 15:29
-	2	((BARCLAY-G BARCLAY-GEORGE BARCLAY-GEORGE-G BARCLAY-GEORGE-GERARD BARCLAY-G-G KAVANAGH-R KAVANAGH-ROBERT-J KAVANAGH-R-J) and (resist photoresist)) and hydroxyadamantyl	USPAT; US-PGPUB; EPO; JPO; DERWENT	2003/04/21 15:30
-	6967	SHIPLEY SHIPLEY-COMPANY-INC SHIPLEE SHIPLEY "SHIPLEY-COMAPNY-L.L.C" SHIPLEY-COMPANY SHIPLEY-COMPANY-INC SHIPLEY-COMPANY-LLC "SHIPLEY-COMPANY-LL.C" "SHIPLEY-COMPANY-L.L.C" "SHIPLEY-COMPANY-L.L.C-OF-MARLBOROUGH" "SHIPLEY-COMPANY-L.L.C-OF-MARLBOROUGH-MASSACHUSETTS" \$HHPBYASHSELEFLACOMFANMEINC SHIPLEE SHIPLEY "SHIPLEY-COMAPNY-L.L.C" SHIPLEY-COMPANY SHIPLEY-COMPANY-INC SHIPLEY-COMPANY-LLC "SHIPLEY-COMPANY-LL.C" "SHIPLEY-COMPANY-L.L.C" "SHIPLEY-COMPANY-L.L.C-OF-MARLBOROUGH" "SHIPLEY-COMPANY-L.L.C-OF-MARLBOROUGH-MASSACHUSETTS" SHIPLEY SHIPLEY-COMPANY-INC) and	USPAT; US-PGPUB; EPO; JPO; DERWENT	2003/04/21 15:31
-	5	(hydroxyadamantyl and (photoresist resist))	USPAT; US-PGPUB; EPO; JPO; DERWENT	2003/04/21 15:31

Search History 4/22/03 10:22:37 AM Page 1

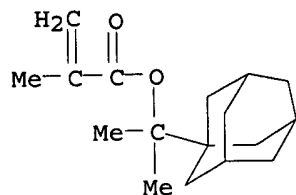
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-	3	((SHIPLAY SHIPLAY-COMPANY-INC SHIPLEE SHIPLEY "SHIPLEY-COMAPNY-L.L.C" SHIPLEY-COMPANY SHIPLEY-COMPANY-INC SHIPLEY-COMPANY-LLC "SHIPLEY-COMPANY-LL.C" "SHIPLEY-COMPANY-L.L.C" "SHIPLEY-COMPANY-L.L.C-OF-MARLBOROUGH" "SHIPLEY-COMPANY-L.L.C-OF-MARLBOROUGH-MASSACHUSETTS" SHIPLY SHIPLY-COMPANY-INC) and (hydroxyadamantyl and (photoresist resist))) not (((BARCLAY-G BARCLAY-GEORGE BARCLAY-GEORGE-G BARCLAY-GEORGE-GERARD BARCLAY-G-G KAVANAGH-R KAVANAGH-ROBERT-J KAVANAGH-R-J) and (resist photoresist))) (hydroxyadamantyl and (photoresist resist)))	USPAT; US-PGPUB; EPO; JPO; DERWENT	2003/04/21 15:47
-	137	KAVANAGH-R-J addmantyl and (photoresist resist) and hydroxyadamantyl)	USPAT; US-PGPUB; EPO; JPO; DERWENT	2003/04/21 15:47
-	47	((hydroxy adj4 adamantyl) hydroxy-adamantyl) and (photoresist resist)	USPAT; US-PGPUB; EPO; JPO; DERWENT	2003/04/21 15:49
-	40	((hydroxy adj4 adamantyl) hydroxy-adamantyl) and (photoresist resist)) not (((("20020187420").PN.) hydroxyadamantyl (hydroxyadamantyl and (photoresist resist)) ((BARCLAY-G BARCLAY-GEORGE BARCLAY-GEORGE-G BARCLAY-GEORGE-GERARD BARCLAY-G-G KAVANAGH-R KAVANAGH-ROBERT-J KAVANAGH-R-J) and (resist photoresist))) (SHIPLAY SHIPLAY-COMPANY-INC SHIPLEE SHIPLEY "SHIPLEY-COMAPNY-L.L.C" SHIPLEY-COMPANY SHIPLEY-COMPANY-INC SHIPLEY-COMPANY-LLC "SHIPLEY-COMPANY-LL.C" "SHIPLEY-COMPANY-L.L.C" "SHIPLEY-COMPANY-L.L.C-OF-MARLBOROUGH" "SHIPLEY-COMPANY-L.L.C-OF-MARLBOROUGH-MASSACHUSETTS" SHIPLY SHIPLY-COMPANY-INC) ((SHIPLAY SHIPLAY-COMPANY-INC SHIPLEE SHIPLEY "SHIPLEY-COMAPNY-L.L.C" SHIPLEY-COMPANY SHIPLEY-COMPANY-INC SHIPLEY-COMPANY-LLC "SHIPLEY-COMPANY-LL.C" "SHIPLEY-COMPANY-L.L.C" "SHIPLEY-COMPANY-L.L.C-OF-MARLBOROUGH" "SHIPLEY-COMPANY-L.L.C-OF-MARLBOROUGH-MASSACHUSETTS" SHIPLY SHIPLY-COMPANY-INC) and (hydroxyadamantyl and (photoresist resist))) (((SHIPLAY SHIPLAY-COMPANY-INC SHIPLEE SHIPLEY "SHIPLEY-COMAPNY-L.L.C" SHIPLEY-COMPANY SHIPLEY-COMPANY-INC SHIPLEY-COMPANY-LLC "SHIPLEY-COMPANY-LL.C" "SHIPLEY-COMPANY-L.L.C" "SHIPLEY-COMPANY-L.L.C-OF-MARLBOROUGH" "SHIPLEY-COMPANY-L.L.C-OF-MARLBOROUGH-MASSACHUSETTS" SHIPLY SHIPLY-COMPANY-INC) and (hydroxyadamantyl and (photoresist resist))) not (((BARCLAY-G BARCLAY-GEORGE BARCLAY-GEORGE-G BARCLAY-GEORGE-GERARD BARCLAY-G-G KAVANAGH-R KAVANAGH-ROBERT-J KAVANAGH-R-J) and (resist photoresist))) and hydroxyadamantyl)))	USPAT; US-PGPUB; EPO; JPO; DERWENT	2003/04/21 15:49

CM 2

CRN 279218-76-7

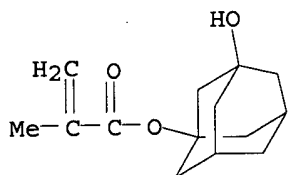
CMF C17 H26 O2



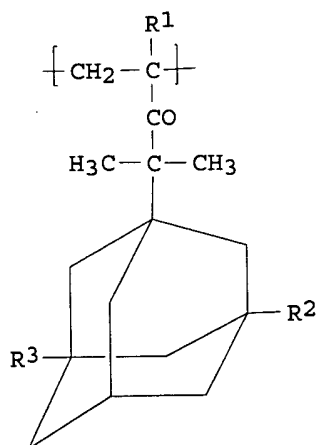
CM 3

CRN 115372-36-6

CMF C14 H20 O3



GI



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AB The polymer is that having .gtoreq.1 adamantyl-substituted monomer unit I (R¹ = H, Me; R², R³ = H, OH). The **photoresist** compn. contains the polymer and a photosensitive **acid-generating** agent. The **photoresist** compn., showing good etching resistance, is suitable for photolithog. in semiconductor device fabrication.

L10 ANSWER 14 OF 23 CAPLUS COPYRIGHT 2003 ACS
ACCESSION NUMBER: 2001:513976 CAPLUS

DUPLICATE 8

Stn Search
Part II

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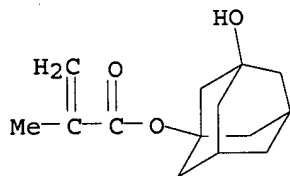
DOCUMENT NUMBER: 135:84294
 TITLE: Alkali-developable negative-working chemically amplified **resist** composition and method for pattern formation for manufacturing electronic devices using same
 INVENTOR(S): Nozaki, Koji; Namiki, Takahisa; Yano, Ei; Kon, Junichi; Kozawa, Miwa
 PATENT ASSIGNEE(S): Fujitsu Ltd., Japan
 SOURCE: Fr. Demande, 126 pp.
 CODEN: FRXXBL
 DOCUMENT TYPE: Patent
 LANGUAGE: French
 FAMILY ACC. NUM. COUNT: 1
 PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
FR 2798202	A1	20010309	FR 2000-11226	20000904
FR 2798202	B1	20021206		
JP 2001249455	A2	20010914	JP 2000-61090	20000306
JP 2001249456	A2	20010914	JP 2000-61091	20000306
✓ JP 2001154357	A2	20010608	JP 2000-257661	20000828
US 6506534	B1	20030114	US 2000-654433	20000901
DE 10043678	A1	20010613	DE 2000-10043678	20000903
PRIORITY APPLN. INFO.:			JP 1999-248619	A 19990902
			JP 1999-260815	A 19990914
			JP 2000-61090	A 20000306
			JP 2000-61091	A 20000306
			JP 2000-257661	A 20000828

IT 288071-46-5P, 3-Hydroxy-1-adamantyl methacrylate-vinylphenol copolymer 346618-97-1P
 RL: SPN (Synthetic preparation); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)
 (resin in alkali-developable neg.-working chem. amplified resist compn.)
 RN 288071-46-5 CAPLUS
 CN 2-Propenoic acid, 2-methyl-, 3-hydroxytricyclo[3.3.1.1^{3,7}]dec-1-yl ester, polymer with ethenylphenol (9CI) (CA INDEX NAME)

CM 1

CRN 115372-36-6
 CMF C14 H20 O3



CM 2

CRN 31257-96-2
 CMF C8 H8 O
 CCI IDS



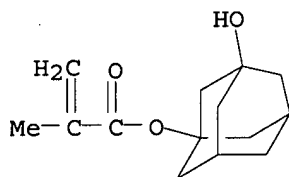
D1-OH

D1-CH=CH₂

RN 346618-97-1 CAPLUS
 CN 2-Propenoic acid, 2-methyl-, 3-hydroxytricyclo[3.3.1.1^{3,7}]dec-1-yl ester,
 polymer with 4-ethenylphenyl acetate (9CI) (CA INDEX NAME)

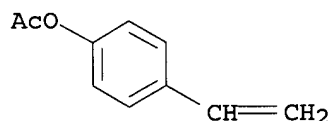
CM 1

CRN 115372-36-6
 CMF C14 H20 O3



CM 2

CRN 2628-16-2
 CMF C10 H10 O2



AB The neg.-working **resist** compn. contains an alkali-sol. film-forming polymer having a repeating unit with an alkali sol. group and another repeating unit with an alc. group reacting with the alkali sol. group, and an **photoacid generator**. An **photoacid generator** to promote the reaction between the alkali sol. group and the alc. group on the polymer or to form a protecting group for the alkali sol. group for providing a resistance for the polymer to be solubilized in aq. alkali developer. The **photoacid generator** is sol. in an aq. alkali soln. and becomes insol. in the alkali after generating an acid. The **resist** compn. is suitable for short wavelength light such as ArF excimer laser and provides the high sensitivity and the excellent dry-etching resistance.

L10 ANSWER 15 OF 23 CAPLUS COPYRIGHT 2003 ACS DUPLICATE 9
 ACCESSION NUMBER: 2001:747251 CAPLUS
 DOCUMENT NUMBER: 135:296190
 TITLE: Chemically amplified positive **resist**

INVENTOR(S): composition
Uetani, Yasunori; Yamada, Airi; Miya, Yoshiko; Takata, Yoshiyuki
PATENT ASSIGNEE(S): Sumitomo Chemical Company, Limited, Japan
SOURCE: Eur. Pat. Appl., 18 pp.
CODEN: EPXXDW
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

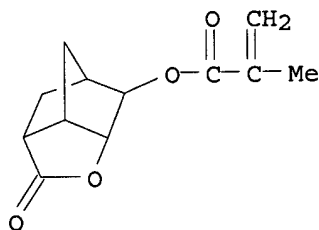
PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
EP 1143299	A1	20011010	EP 2001-107747	20010402
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO				
CN 1316675	A	20011010	CN 2001-110230	20010402
US 2001044070	A1	20011122	US 2001-824227	20010403
JP 2002296783	A2	20021009	JP 2001-104302	20010403
PRIORITY APPLN. INFO.:				
			JP 2000-101868	A 20000404
			JP 2000-133328	A 20000502
			JP 2000-209505	A 20000711
			JP 2001-14261	A 20010123

IT 364736-27-6P
RL: SPN (Synthetic preparation); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)
(chem. amplified pos. resist compn. contg.)

RN 364736-27-6 CAPLUS
CN 2-Propenoic acid, 2-methyl-, 2-ethyltricyclo[3.3.1.1^{3,7}]dec-2-yl ester, polymer with hexahydro-2-oxo-3,5-methano-2H-cyclopenta[b]furan-6-yl 2-methyl-2-propenoate, 3-hydroxytricyclo[3.3.1.1^{3,7}]dec-1-yl 2-methyl-2-propenoate and tetrahydro-2-oxo-3-furanyl 2-methyl-2-propenoate (9CI) (CA INDEX NAME)

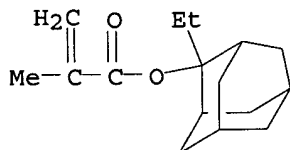
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CRN 254900-07-7
CMF C12 H14 O4



CM 2

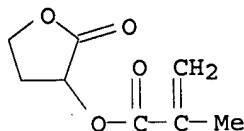
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CM 3

CRN 195000-66-9

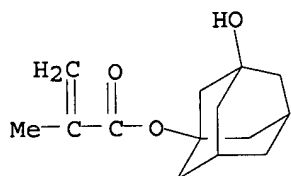
CMF C8 H10 O4



CM 4

CRN 115372-36-6

CMF C14 H20 O3



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* STRUCTURE DIAGRAM TOO LARGE FOR DISPLAY - AVAILABLE VIA OFFLINE PRINT *

AB A chem. amplification type pos. **resist** compn. comprises an **acid generating** agent and a **resin** having polymeric units (A), (B) and (C). The polymeric unit (A) is an alicyclic lactone selected from polymeric units I and II (R1,2 = H, Me; and n = 1-3). The polymeric unit (B) is selected 3-hydroxy-1-adamantyl (meth)acrylate represented by III, IV (R3 = H, methyl; R4 = H, hydroxyl; R5,6 = H, C1-3 alkyl or hydroxyalkyl, etc.) and a unit derived from unsatd. dicarboxylic acid anhydride selected from maleic anhydride and itaconic anhydride and a polymeric unit of (.alpha.) .beta.- (meth)acryloyloxy-.gamma.-butyrolactone represented by V (R7 = H, Me). The polymeric unit (C) is the one which becomes alkali-sol. by cleavage of a part of groups by the action of an acid. The pos. **resist** compn. of this invention is excellent in balance of properties such as resoln., profile, sensitivity, dry etching resistance, adhesion, and the like.

REFERENCE COUNT: 2 THERE ARE 2 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L10 ANSWER 16 OF 23 USPATFULL

ACCESSION NUMBER: 2001:212076 USPATFULL

TITLE: Chemically amplified positive **resist** composition

INVENTOR(S): Uetani, Yasunori, Osaka, Japan
Yamada, Airi, Osaka, Japan
Miya, Yoshiko, Muko-shi, Japan
Takata, Yoshiyuki, Osaka, Japan

	NUMBER	KIND	DATE
PATENT INFORMATION:	US 2001044070	A1	20011122
APPLICATION INFO.:	US 2001-824227	A1	20010403 (9)

	NUMBER	DATE
PRIORITY INFORMATION:	JP 2000-101868	20000404
	JP 2000-133328	20000502
	JP 2000-209505	20000711
DOCUMENT TYPE:	Utility	
FILE SEGMENT:	APPLICATION	
LEGAL REPRESENTATIVE:	BIRCH STEWART KOLASCH & BIRCH, PO BOX 747, FALLS CHURCH, VA, 22040-0747	
NUMBER OF CLAIMS:	5	
EXEMPLARY CLAIM:	1	
LINE COUNT:	894	

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

IT 364736-27-6P, 2-Ethyl-2-adamantyl methacrylate-3-hydroxy-1-adamantyl methacrylate-5-methacryloyloxy-2,6-norbornanecarbolactone-.alpha.-methacryloyloxy-.gamma.-butyrolactone copolymer (chem. amplified pos. resist compn. contg.)

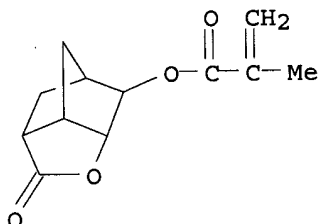
RN 364736-27-6 USPATFULL

CN 2-Propenoic acid, 2-methyl-, 2-ethyltricyclo[3.3.1.1^{3,7}]dec-2-yl ester, polymer with hexahydro-2-oxo-3,5-methano-2H-cyclopenta[b]furan-6-yl 2-methyl-2-propenoate, 3-hydroxytricyclo[3.3.1.1^{3,7}]dec-1-yl 2-methyl-2-propenoate and tetrahydro-2-oxo-3-furanyl 2-methyl-2-propenoate (9CI) (CA INDEX NAME)

CM 1

CRN 254900-07-7

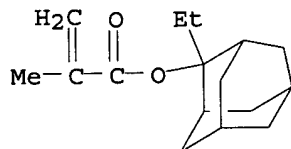
CMF C12 H14 O4



CM 2

CRN 209982-56-9

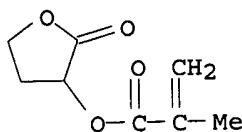
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CM 3

CRN 195000-66-9

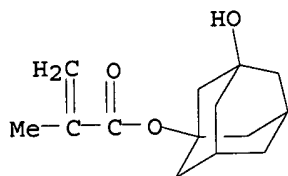
CMF C8 H10 O4



CM 4

CRN 115372-36-6

CMF C14 H20 O3



AB

A chemical amplification type positive **resist** composition excellent in balance of properties such as resolution, profile, sensitivity, dry etching resistance, adhesion and the like which comprises a **resin** which has the following polymeric units (A), (B) and (C); and an **acid generating** agent.

(A): At least one polymeric unit of an alicyclic lactone selected from polymeric units represented by the following formulae (Ia) and (Ib):
##STR1##

(B): At least one polymeric unit selected from a polymeric unit of 3-hydroxy-1-adamantyl (meth)acrylate represented by the following formula (II), a polymeric unit of a combination of a unit represented by the following formula (III) and a unit derived from unsaturated dicarboxylic acid anhydride selected from maleic anhydride and itaconic anhydride and a polymeric unit of (.alpha.).beta.-(meth)acryloyloxy-.gamma.-butyrolactone represented by the following formula (IV):
##STR2##

(C) A polymeric unit which becomes alkali-soluble by cleavage of a part of groups by the action of an acid.

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

L10 ANSWER 17 OF 23 USPATFULL

ACCESSION NUMBER: 2001:139256 USPATFULL

TITLE: Chemically amplified positive **resist** composition

INVENTOR(S): Nakanishi, Junji, Kyoto-shi, Japan
Takata, Yoshiyuki, Osaka, Japan

	NUMBER	KIND	DATE
PATENT INFORMATION:	US 2001016298	A1	20010823
	US 6537726	B2	20030325
APPLICATION INFO.:	US 2001-770212	A1	20010129 (9)

NUMBER

DATE

1-29-01

PRIORITY INFORMATION: JP 2000-21687 20000131
DOCUMENT TYPE: Utility
FILE SEGMENT: APPLICATION
LEGAL REPRESENTATIVE: BIRCH STEWART KOLASCH & BIRCH, PO BOX 747, FALLS
CHURCH, VA, 22040-0747

NUMBER OF CLAIMS: 6
EXEMPLARY CLAIM: 1
LINE COUNT: 591

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

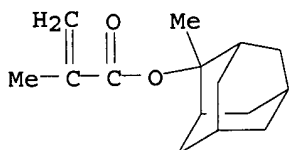
IT 348631-34-5P, .beta.-Methacryloyloxy-.gamma.-Butyrolactone-3-
Hydroxy-1-adamantyl methacrylate-2-methyl-2-adamantyl methacrylate
copolymer
(Chem. amplified pos. resist compn.)

RN 348631-34-5 USPATFULL

CN 2-Propenoic acid, 2-methyl-, 3-hydroxytricyclo[3.3.1.1^{3,7}]dec-1-yl ester,
polymer with 2-methyltricyclo[3.3.1.1^{3,7}]dec-2-yl 2-methyl-2-propenoate
and tetrahydro-5-oxo-3-furanyl 2-methyl-2-propenoate (9CI) (CA INDEX
NAME)

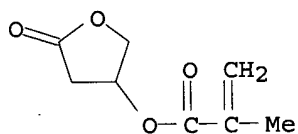
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CRN 177080-67-0
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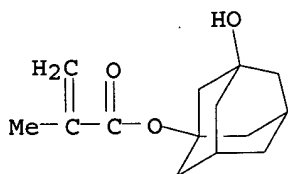
CM 2

CRN 130224-95-2
CMF C8 H10 O4



CM 3

CRN 115372-36-6
CMF C14 H20 O3



AB A chemically amplified positive **resist** composition capable of giving a **resist** film excellent in adhesion to a substrate;

excellent in various **resist** performance characteristics such as dry etching resistance, sensitivity and resolution; and comprising a **resin** (X) which

per se, is insoluble or slightly soluble in alkali but becomes soluble in alkali due to an action of acid,

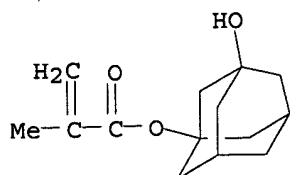
and has a polymeric unit (a) derived from 3-hydroxy-1-adamantyl(meth)acrylate and a polymeric unit (b) derived from .beta.-(meth)acryloyloxy-.gamma.-butyrolactone wherein the lactone ring may optionally be substituted by alkyl; and an **acid generating agent** (Y).

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

L10 ANSWER 18 OF 23 CAPLUS COPYRIGHT 2003 ACS DUPLICATE 10
 ACCESSION NUMBER: 2000:553787 CAPLUS
 DOCUMENT NUMBER: 133:170246
 TITLE: Chemical amplified positive-working **resist** composition
 INVENTOR(S): Uetani, Yasunori; Kamabuchi, Akira
 PATENT ASSIGNEE(S): Sumitomo Chemical Company, Limited, Japan
 SOURCE: PCT Int. Appl., 26 pp.
 CODEN: PIXXD2
 DOCUMENT TYPE: Patent
 LANGUAGE: Japanese
 FAMILY ACC. NUM. COUNT: 1
 PATENT INFORMATION:

8-10-02

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2000046640	A1	20000810	WO 2000-JP547	20000202
W: AE, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, CA, CH, CN, CR, CU, CZ, DE, DK, DM, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, TZ, UA, UG, US, UZ, VN, YU, ZA, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM RW: GH, GM, KE, LS, MW, SD, SL, SZ, TZ, UG, ZW, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, BF, BJ, CF, CG, CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG				
JP 2000227658	A2	20000815	JP 1999-28895	19990205
PRIORITY APPLN. INFO.:			JP 1999-28895	A 19990205
IT	288071-46-5DP, 1-ethoxyethyl ether 288071-46-5P, Hydroxystyrene-3-hydroxy-1-adamantyl methacrylate copolymer RL: PNU (Preparation, unclassified); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses) (chem. amplified pos.-working resist compn.)			
RN	288071-46-5 CAPLUS			
CN	2-Propenoic acid, 2-methyl-, 3-hydroxytricyclo[3.3.1.1 ^{3,7}]dec-1-yl ester, polymer with ethenylphenol (9CI) (CA INDEX NAME)			
CM	1			
CRN	115372-36-6			
CMF	C14 H20 O3			



CM 2

CRN 31257-96-2

CMF C8 H8 O

CCI IDS



D1-OH

D1-CH=CH₂

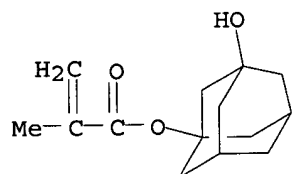
RN 288071-46-5 CAPLUS

CN 2-Propenoic acid, 2-methyl-, 3-hydroxytricyclo[3.3.1.13,7]dec-1-yl ester,
polymer with ethenylphenol (9CI) (CA INDEX NAME)

CM 1

CRN 115372-36-6

CMF C14 H20 O3



CM 2

CRN 31257-96-2

CMF C8 H8 O

CCI IDS



D1-OH

D1-CH=CH₂

AB A chem. amplified pos.-working **resist** compn. is characterized by comprising: a **resin** which has units of hydroxystyrene, units of 3-hydroxy-1-adamantyl methacrylate, and units of a monomer having a group unstable to acids and which itself is insol. or sparingly sol. in alkalis but becomes sol. in alkalis when the group unstable to acids is cleaved by the action of an acid; and an **acid generator**. This **resist** compn. improves exposure latitude and resolu., while satisfactorily maintaining or retaining various properties such as sensitivity, heat resistance, film retention, applicability, and dry etching resistance. By using this compn., a fine **resist** pattern can be formed precisely.

REFERENCE COUNT: 12 THERE ARE 12 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L10 ANSWER 19 OF 23 CAPLUS COPYRIGHT 2003 ACS DUPLICATE 11
 ACCESSION NUMBER: 2000:877011 CAPLUS
 DOCUMENT NUMBER: 134:63888
 TITLE: Positive-working chemical amplification
photoresist composition for far-ultraviolet
 ray exposure
 INVENTOR(S): Sato, Kenichiro; Kodama, Kunihiro; Aogo, Toshiaki
 PATENT ASSIGNEE(S): Fuji Photo Film Co., Ltd., Japan
 SOURCE: Jpn. Kokai Tokkyo Koho, 52 pp.
 CODEN: JKXXAF
 DOCUMENT TYPE: Patent
 LANGUAGE: Japanese
 FAMILY ACC. NUM. COUNT: 8
 PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 2000347408	A2	20001215	JP 1999-158693	19990604
US 6479211	B1	20021112	US 2000-577884	20000525
PRIORITY APPLN. INFO.:			JP 1999-146774	A 19990526
			JP 1999-146775	A 19990526
			JP 1999-150215	A 19990528
			JP 1999-152860	A 19990531
			JP 1999-152861	A 19990531
			JP 1999-152862	A 19990531
			JP 1999-158693	A 19990604
			JP 1999-158695	A 19990604

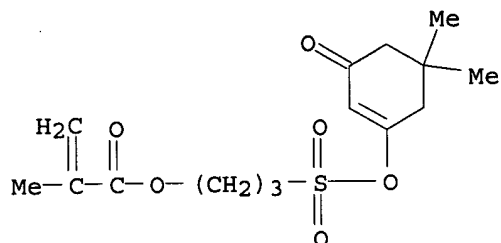
IT 312616-52-7P 312620-58-9P
 RL: SPN (Synthetic preparation); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)
 (pos.-working chem. amplification **photoresist** compn. for far-UV ray exposure)

RN 312616-52-7 CAPLUS
 CN 2-Propenoic acid, 2-methyl-, 3-[[[(5,5-dimethyl-3-oxo-1-cyclohexen-1-yl)oxy]sulfonyl]propyl ester, polymer with 3-hydroxytricyclo[3.3.1.1^{3,7}]dec-1-yl 2-methyl-2-propenoate and tetrahydro-4-methyl-2-oxo-2H-pyran-4-yl 2-methyl-2-propenoate (9CI) (CA INDEX NAME)

CM 1

CRN 289040-47-7

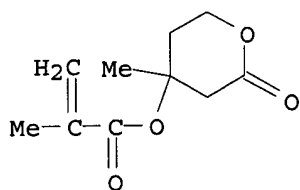
CMF C15 H22 O6 S



CM 2

CRN 177080-66-9

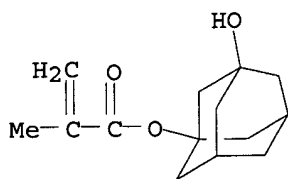
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CM 3

CRN 115372-36-6

CMF C14 H20 O3



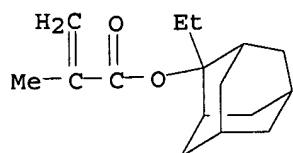
RN 312620-58-9 CAPLUS

CN 2-Propenoic acid, 2-methyl-, polymer with 2-ethyltricyclo[3.3.1.1^{3,7}]dec-2-yl 2-methyl-2-propenoate, 3-hydroxytricyclo[3.3.1.1^{3,7}]dec-1-yl 2-methyl-2-propenoate and tetrahydro-2-oxo-3-furanyl 2-methyl-2-propenoate (9CI) (CA INDEX NAME)

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CRN 209982-56-9

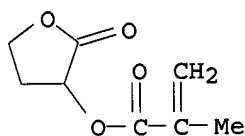
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CM 2

CRN 195000-66-9

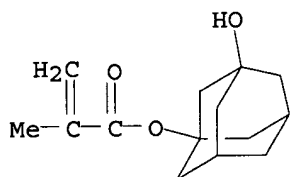
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CM 3

CRN 115372-36-6

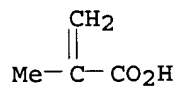
CMF C14 H20 O3



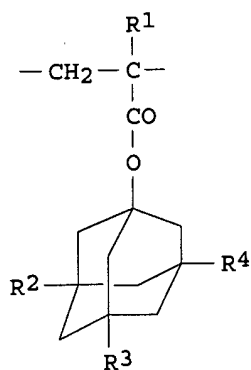
CM 4

CRN 79-41-4

CMF C4 H6 O2



GI



AB A pos.-working **photoresist** contg. (A) a compd. generating an acid upon irradiation with active ray or radioactive ray, (B) a **resin** having a repeating unit (I; R1 = H, halo, C1-4 linear or branched alkyl; R2 - R4 = H or OH, provided that at least one of R2 - R4 is OH) and decomposing upon reaction with an acid to increase the solubility in an alkali developer, and (C) a compd. generating sulfonic acid is described. This **photoresist** decreases the development of defects or the formation of scums when using an exposure source of 150 nm wavelength, in particular, 193 nm, and improves microlithography (photolithography) process of LSI and microchips using far-UV ray such as excimer laser beam.

L10 ANSWER 20 OF 23 CAPLUS COPYRIGHT 2003 ACS DUPLICATE 12
 ACCESSION NUMBER: 2000:863764 CAPLUS
 DOCUMENT NUMBER: 134:49207
 TITLE: Argon fluoride excimer laser-sensitive positive-working **photoresist** composition
 INVENTOR(S): Sato, Kenichiro; Nakao, Hajime; Aogo, Toshiaki
 PATENT ASSIGNEE(S): Fuji Photo Film Co., Ltd., Japan
 SOURCE: Jpn. Kokai Tokkyo Koho, 46 pp.
 CODEN: JKXXAF
 DOCUMENT TYPE: Patent
 LANGUAGE: Japanese
 FAMILY ACC. NUM. COUNT: 8
 PATENT INFORMATION:

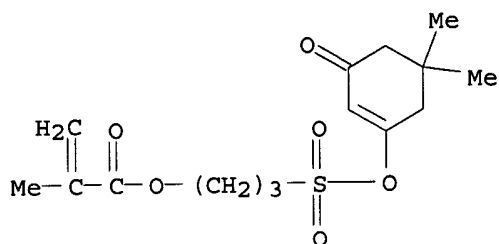
PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
✓ JP 2000338681	A2	20001208	JP 1999-152862	19990531
✓ US 6479211	B1	20021112	US 2000-577884	20000525
PRIORITY APPLN. INFO.:			JP 1999-146774	A 19990526
			JP 1999-146775	A 19990526
			JP 1999-150215	A 19990528
			JP 1999-152860	A 19990531
			JP 1999-152861	A 19990531
			JP 1999-152862	A 19990531
			JP 1999-158693	A 19990604
			JP 1999-158695	A 19990604

IT 312616-52-7P 312616-53-8P
 RL: SPN (Synthetic preparation); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)
 (resin in argon fluoride excimer laser-sensitive pos.-working photoresist compn.)
 RN 312616-52-7 CAPLUS
 CN 2-Propenoic acid, 2-methyl-, 3-[[[(5,5-dimethyl-3-oxo-1-cyclohexen-1-yl)oxy]sulfonyl]propyl ester, polymer with 3-hydroxytricyclo[3.3.1.1^{3,7}]dec-1-yl 2-methyl-2-propenoate and tetrahydro-4-methyl-2-oxo-2H-pyran-4-yl 2-methyl-2-propenoate (9CI) (CA INDEX NAME)

CM 1

CRN 289040-47-7

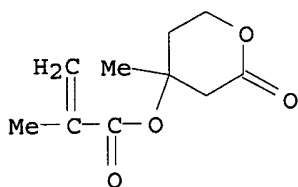
CMF C15 H22 O6 S



CM 2

CRN 177080-66-9

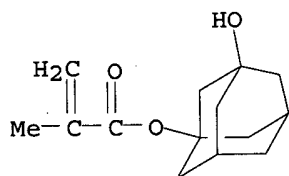
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CM 3

CRN 115372-36-6

CMF C14 H20 O3



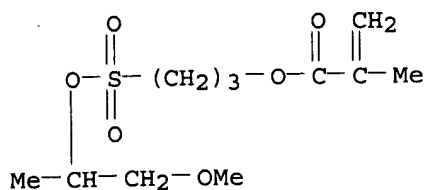
RN 312616-53-8 CAPLUS

CN 2-Propenoic acid, 2-methyl-, 3-hydroxytricyclo[3.3.1.1^{3,7}]dec-1-yl ester, polymer with 3-[(2-methoxy-1-methylethoxy)sulfonyl]propyl 2-methyl-2-propenoate and tetrahydro-3-methyl-2-oxo-3-furanyl 2-methyl-2-propenoate (9CI) (CA INDEX NAME)

CM 1

CRN 221041-24-3

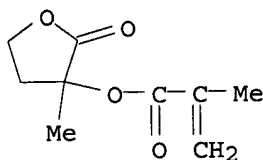
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CM 2

CRN 211802-06-1

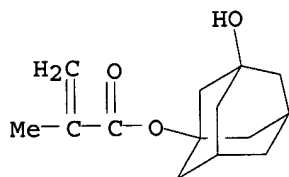
CMF C9 H12 O4



CM 3

CRN 115372-36-6

CMF C14 H20 O3



AB The title compn. contains an **acid-generating** compd., a **resin** sensitive to an acid to become sol. in an alkali, and a solvent. The **resin** has a specific repeating unit contg. an adamantane structure. The solvent contains 60-90 % of Et lactate, propylene glycol monomethyl ether acetate, propylene glycol monomethyl ether propionate, Me 3-methoxypropionate, Et 3-methoxypropionate, or 2-heptanone. The solvent also contains 10-40 % of a solvent having .ltoreq.1 cPs at 20 .degree.C. The compn. provides the high sensitivity, the high resoln., the excellent dry-etching resistance, the strong contact to the substrate.

L10 ANSWER 21 OF 23 CAPLUS COPYRIGHT 2003 ACS

DUPLICATE 13

ACCESSION NUMBER:

2000:863763 CAPLUS

DOCUMENT NUMBER:

134:49206

TITLE:

Excimer laser-sensitive positive-working
photoresist composition

INVENTOR(S):

Sato, Kenichiro; Kodama, Kunihiro; Aogo, Toshiaki

PATENT ASSIGNEE(S):

Fuji Photo Film Co., Ltd., Japan

SOURCE:

Jpn. Kokai Tokkyo Koho, 72 pp.

CODEN: JKXXAF

DOCUMENT TYPE:

Patent

LANGUAGE:

Japanese

FAMILY ACC. NUM. COUNT: 8

PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 2000338680	A2	20001208	JP 1999-152861	19990531
US 6479211	B1	20021112	US 2000-577884	20000525

PRIORITY APPLN. INFO.:

JP 1999-146774	A	19990526
JP 1999-146775	A	19990526
JP 1999-150215	A	19990528
JP 1999-152860	A	19990531
JP 1999-152861	A	19990531
JP 1999-152862	A	19990531
JP 1999-158693	A	19990604
JP 1999-158695	A	19990604

IT 312616-52-7P 312616-53-8P

RL: SPN (Synthetic preparation); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)

(resin in excimer laser-sensitive pos.-working photoresist compn.)

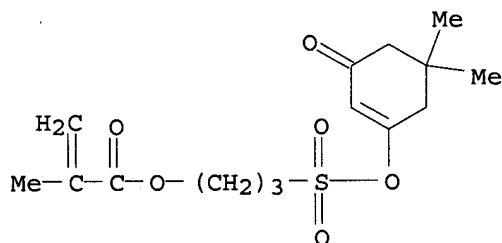
RN 312616-52-7 CAPLUS

CN 2-Propenoic acid, 2-methyl-, 3-[[[(5,5-dimethyl-3-oxo-1-cyclohexen-1-yl)oxy]sulfonyl]propyl ester, polymer with 3-hydroxytricyclo[3.3.1.1^{3,7}]dec-1-yl 2-methyl-2-propenoate and tetrahydro-4-methyl-2-oxo-2H-pyran-4-yl 2-methyl-2-propenoate (9CI) (CA INDEX NAME)

CM 1

CRN 289040-47-7

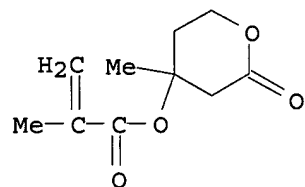
CMF C15 H22 O6 S



CM 2

CRN 177080-66-9

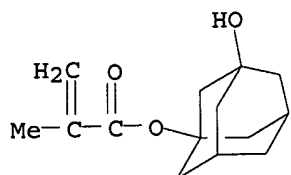
CMF C10 H14 O4



CM 3

CRN 115372-36-6

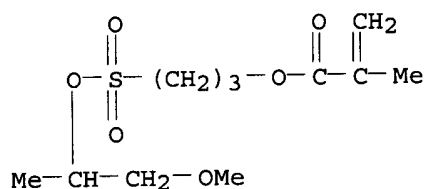
CMF C14 H20 O3



RN 312616-53-8 CAPLUS
 CN 2-Propenoic acid, 2-methyl-, 3-hydroxytricyclo[3.3.1.1.3]dec-1-yl ester,
 polymer with 3-[(2-methoxy-1-methylethoxy)sulfonyl]propyl
 2-methyl-2-propenoate and tetrahydro-3-methyl-2-oxo-3-furanyl
 2-methyl-2-propenoate (9CI) (CA INDEX NAME)

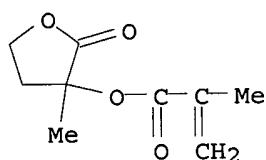
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CRN 221041-24-3
 CMF C11 H20 O6 S



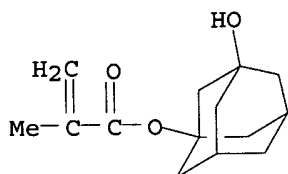
CM 2

CRN 211802-06-1
 CMF C9 H12 O4



CM 3

CRN 115372-36-6
 CMF C14 H20 O3



AB The title compn. contains an **acid-generating** compd., a
resin sensitive to an acid to become sol. in an alkali, and a
 polyester or a naphthalene ester. The **resin** has a specific

repeating unit contg. an adamantane structure. The compn. provides the high sensitivity, resoln., dry-etching resistance, contact to the substrate.

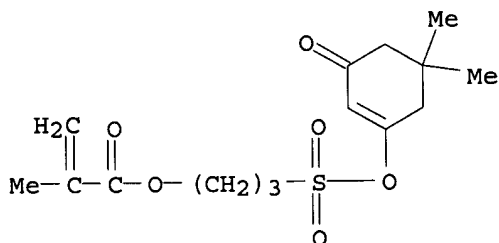
L10 ANSWER 22 OF 23 CAPLUS COPYRIGHT 2003 ACS DUPLICATE 14
 ACCESSION NUMBER: 2000:863762 CAPLUS
 DOCUMENT NUMBER: 134:49205
 TITLE: Argon fluoride excimer laser-sensitive positive-working photoresist composition
 INVENTOR(S): Sato, Kenichiro; Nakao, Hajime; Aogo, Toshiaki
 PATENT ASSIGNEE(S): Fuji Photo Film Co., Ltd., Japan
 SOURCE: Jpn. Kokai Tokkyo Koho, 47 pp.
 CODEN: JKXXAF
 DOCUMENT TYPE: Patent
 LANGUAGE: Japanese
 FAMILY ACC. NUM. COUNT: 8
 PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 2000338679	A2	20001208	JP 1999-152860	19990531
US 6479211	B1	20021112	US 2000-577884	20000525
PRIORITY APPLN. INFO.:			JP 1999-146774	A 19990526
			JP 1999-146775	A 19990526
			JP 1999-150215	A 19990528
			JP 1999-152860	A 19990531
			JP 1999-152861	A 19990531
			JP 1999-152862	A 19990531
			JP 1999-158693	A 19990604
			JP 1999-158695	A 19990604

IT 312616-52-7P 312616-53-8P
 RL: SPN (Synthetic preparation); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)
 (resin in excimer laser-sensitive pos.-working photoresist compn.)
 RN 312616-52-7 CAPLUS
 CN 2-Propenoic acid, 2-methyl-, 3-[[[(5,5-dimethyl-3-oxo-1-cyclohexen-1-yl)oxylsulfonyl]propyl ester, polymer with 3-hydroxytricyclo[3.3.1.1^{3,7}]dec-1-yl 2-methyl-2-propenoate and tetrahydro-4-methyl-2-oxo-2H-pyran-4-yl 2-methyl-2-propenoate (9CI) (CA INDEX NAME)

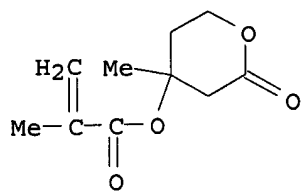
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CRN 289040-47-7
 CMF C15 H22 O6 S



CM 2

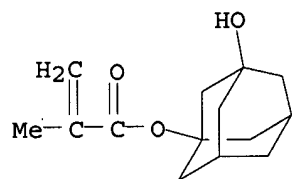
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 CMF C10 H14 O4



CM 3

CRN 115372-36-6

CMF C14 H20 O3



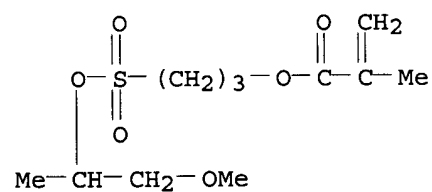
RN 312616-53-8 CAPLUS

CN 2-Propenoic acid, 2-methyl-, 3-hydroxytricyclo[3.3.1.1^{3,7}]dec-1-yl ester,
polymer with 3-[(2-methoxy-1-methylethoxy)sulfonyl]propyl
2-methyl-2-propenoate and tetrahydro-3-methyl-2-oxo-3-furanyl
2-methyl-2-propenoate (9CI) (CA INDEX NAME)

CM 1

CRN 221041-24-3

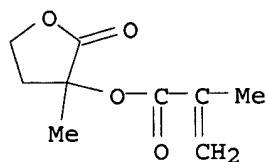
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CM 2

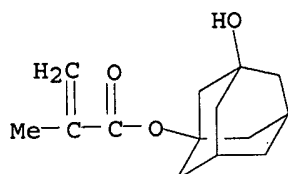
CRN 211802-06-1

CMF C9 H12 O4



CM 3

CRN 115372-36-6
CMF C14 H20 O3



AB The title compn. contains an **acid-generating** compd., a **resin** sensitive to an acid to become sol. in an alkali, a solvent consisting of Et lactate and Et 3-ethoxypropionate. The **resin** has a specific repeating unit contg. an adamantane structure. The compn. provides the high sensitivity, resoln., the high dry-etching resistance, and the strong contact to the substrate.

L10 ANSWER 23 OF 23 CAPLUS COPYRIGHT 2003 ACS DUPLICATE 15
ACCESSION NUMBER: 2000:863759 CAPLUS
DOCUMENT NUMBER: 134:49202
TITLE: Argon fluoride excimer laser-sensitive
positive-working **photoresist** composition
INVENTOR(S): Sato, Kenichiro; Nakao, Hajime; Aogo, Toshiaki
PATENT ASSIGNEE(S): Fuji Photo Film Co., Ltd., Japan
SOURCE: Jpn. Kokai Tokkyo Koho, 47 pp.
CODEN: JKXXAF
DOCUMENT TYPE: Patent
LANGUAGE: Japanese
FAMILY ACC. NUM. COUNT: 8
PATENT INFORMATION:

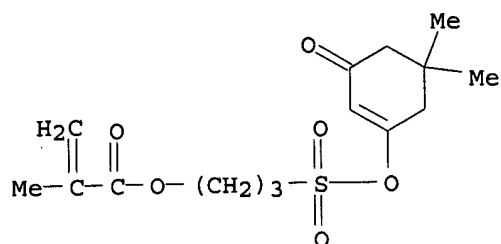
PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 2000338676	A2	20001208	JP 1999-150215	19990528
US 6479211	B1	20021112	US 2000-577884	20000525
PRIORITY APPLN. INFO.:			JP 1999-146774	A 19990526
			JP 1999-146775	A 19990526
			JP 1999-150215	A 19990528
			JP 1999-152860	A 19990531
			JP 1999-152861	A 19990531
			JP 1999-152862	A 19990531
			JP 1999-158693	A 19990604
			JP 1999-158695	A 19990604

IT 312616-52-7P 312616-53-8P
RL: SPN (Synthetic preparation); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)
(**resin** in excimer laser-sensitive pos.-working **photoresist** compn.)

RN 312616-52-7 CAPLUS
CN 2-Propenoic acid, 2-methyl-, 3-[[[(5,5-dimethyl-3-oxo-1-cyclohexen-1-yl)oxylsulfonyl]propyl ester, polymer with 3-hydroxytricyclo[3.3.1.1^{3,7}]dec-1-yl 2-methyl-2-propenoate and tetrahydro-4-methyl-2-oxo-2H-pyran-4-yl 2-methyl-2-propenoate (9CI) (CA INDEX NAME)

CM 1

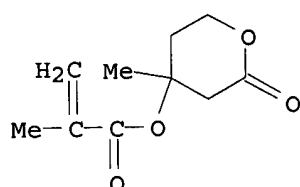
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CMF C15 H22 O6 S



CM 2

CRN 177080-66-9

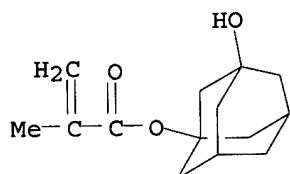
CMF C10 H14 O4



CM 3

CRN 115372-36-6

CMF C14 H20 O3

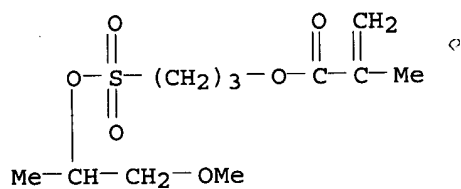


RN 312616-53-8 CAPLUS
 CN 2-Propenoic acid, 2-methyl-, 3-hydroxytricyclo[3.3.1.1^{3,7}]dec-1-yl ester,
 polymer with 3-[(2-methoxy-1-methylethoxy)sulfonyl]propyl
 2-methyl-2-propenoate and tetrahydro-3-methyl-2-oxo-3-furanyl
 2-methyl-2-propenoate (9CI) (CA INDEX NAME)

CM 1

CRN 221041-24-3

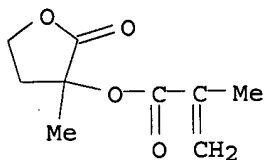
CMF C11 H20 O6 S



CM 2

CRN 211802-06-1

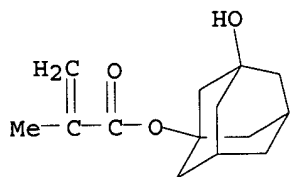
CMF C9 H12 O4



CM 3

CRN 115372-36-6

CMF C14 H20 O3



AB The title compn. contains an **acid-generating** compd., a **resin** sensitive to an acid to become sol. in an alkali, a fluorinated surfactant and/or a silicone surfactant. The **resin** has a specific repeating unit contg. an adamantane structure. The compn. provides a **resist** of the high sensitivity, the high resolu., the strong dry-etching resistance, and the excellent contact to the substrate.

L1 SCREEN CREATED

=>

Uploading C:\Program Files\Stnexp\Queries\10082769.str

L2 STRUCTURE UPLOADED

=> que L2 AND L1

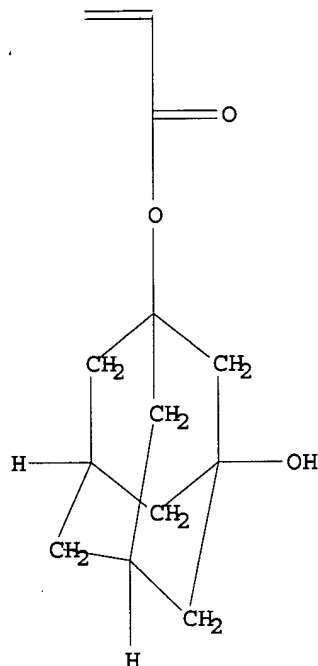
L3 QUE L2 AND L1

=> d

L3 HAS NO ANSWERS

L1 SCR 2067

L2 STR



STN
Search
Part I

Do Not
Remove!

Structure attributes must be viewed using STN Express query preparation.

L3 QUE ABB=ON PLU=ON L2 AND L1

=> s l3 sss sam

SAMPLE SEARCH INITIATED 09:41:50 FILE 'REGISTRY'

SAMPLE SCREEN SEARCH COMPLETED - 32 TO ITERATE

100.0% PROCESSED 32 ITERATIONS
SEARCH TIME: 00.00.01

15 ANSWERS

FULL FILE PROJECTIONS: ONLINE **COMPLETE**
BATCH **COMPLETE**

PROJECTED ITERATIONS: 301 TO 979

PROJECTED ANSWERS: 68 TO 532

L4 15 SEA SSS SAM L2 AND L1

=> s l4 and (photoresist or resist)

27 PHOTORESIST

112 RESIST

L5 0 L4 AND (PHOTORESIST OR RESIST)

=> FIL CAPLUS HCAPLUS USPATFUL
COST IN U.S. DOLLARS

SINCE FILE ENTRY	TOTAL SESSION
9.24	9.45

FULL ESTIMATED COST

FILE 'CAPLUS' ENTERED AT 09:42:17 ON 22 APR 2003
USE IS SUBJECT TO THE TERMS OF YOUR STN CUSTOMER AGREEMENT.
PLEASE SEE "HELP USAGETERMS" FOR DETAILS.
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FILE 'HCAPLUS' ENTERED AT 09:42:17 ON 22 APR 2003
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PLEASE SEE "HELP USAGETERMS" FOR DETAILS.
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FILE 'USPATFULL' ENTERED AT 09:42:17 ON 22 APR 2003
CA INDEXING COPYRIGHT (C) 2003 AMERICAN CHEMICAL SOCIETY (ACS)

=> sw l4
SW IS NOT A RECOGNIZED COMMAND
The previous command name entered was not recognized by the system.
For a list of commands available to you in the current file, enter
"HELP COMMANDS" at an arrow prompt (=>).

=> s l4
L6 59 L4

=> s (resist or photoresist or resin)
L7 1988968 (RESIST OR PHOTORESIST OR RESIN)

=> s l6 and l7
L8 59 L6 AND L7

=> s l8 and (?acid (w) generat?)
L9 39 L8 AND (?ACID (W) GENERAT?)

=> duplicates remove
ENTER L# LIST OR (END):l9
DUPLICATE PREFERENCE IS 'CAPLUS, HCAPLUS, USPATFULL'
KEEP DUPLICATES FROM MORE THAN ONE FILE? Y/(N):n
PROCESSING COMPLETED FOR L9
L10 23 DUPLICATE REMOVE L9 (16 DUPLICATES REMOVED)

=> d l10 1-23 ibib hitstr abs

L10 ANSWER 1 OF 23	CAPLUS	COPYRIGHT 2003 ACS	DUPLICATE 1
ACCESSION NUMBER:	2003:17561	CAPLUS	
DOCUMENT NUMBER:	138:98191		
TITLE:	Positive DUV resist compositions having good SEM resistance, good resolution, and wide defocus latitude		
INVENTOR(S):	Sato, Kenichiro		
PATENT ASSIGNEE(S):	Fuji Photo Film Co., Ltd., Japan		
SOURCE:	Jpn. Kokai Tokkyo Koho, 52 pp. CODEN: JKXXAF		
DOCUMENT TYPE:	Patent		
LANGUAGE:	Japanese		
FAMILY ACC. NUM. COUNT:	1		
PATENT INFORMATION:			

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
-----	----	-----	-----	-----

1-8-03

JP 2003005374 A2 20030108 JP 2001-188414 20010621
 PRIORITY APPLN. INFO.: JP 2001-188414 20010621

IT 482620-88-2P

RL: IMF (Industrial manufacture); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)

(pos. DUV **resist** compns. contg. blend lactone polymers having good SEM resistance, good resolu., and wide defocus latitude)

RN 482620-88-2 CAPLUS

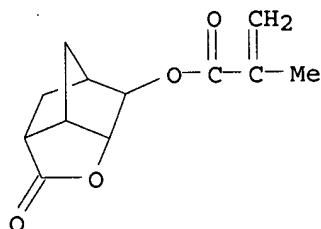
CN 2-Propenoic acid, 2-methyl-, 2-ethyltricyclo[3.3.1.1^{3,7}]dec-2-yl ester, polymer with hexahydromethyl-2-oxo-3,5-methano-2H-cyclopenta[b]furan-6-yl 2-methyl-2-propenoate and 3-hydroxytricyclo[3.3.1.1^{3,7}]dec-1-yl 2-propenoate (9CI) (CA INDEX NAME)

CM 1

CRN 482620-87-1

CMF C13 H16 O4

CCI IDS

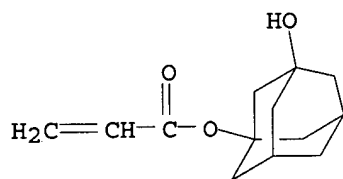


D1-Me

CM 2

CRN 216581-76-9

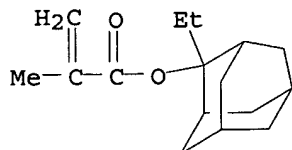
CMF C13 H18 O3



CM 3

CRN 209982-56-9

CMF C16 H24 O2



AB The resist compns. contain (A) .gtoreq.2 resins whose rate of dissoln. to alkali developers increase by acids and are composed of .gtoreq.1 mer units selected from (a1) butyrolactones, (a2) norbornane lactones, (a3) cyclohexane lactones, and (a4) adamantane lactones and (B) compds. which generate acids by actinic ray or radiation, wherein mixts. of resins A contain .gtoreq.2 mer units of (a1) to (a4). The compns. have good SEM resistance (suppressed shrinkage under SEM observation), good resoln., and wide defocus latitude (DOF).

L10 ANSWER 2 OF 23 USPATFULL

ACCESSION NUMBER: 2003:78370 USPATFULL

TITLE: Polymer, resist material and patterning method

INVENTOR(S): Nishi, Tsunehiro, Niigata-ken, JAPAN
Kinsho, Takeshi, Niigata-ken, JAPAN

	NUMBER	KIND	DATE
PATENT INFORMATION:	US 2003054290	A1	20030320
APPLICATION INFO.:	US 2002-200647	A1	20020722

3/20/03
(10) 7/22/02

	NUMBER	DATE
PRIORITY INFORMATION:	JP 2001-222455	20010724
DOCUMENT TYPE:	Utility	
FILE SEGMENT:	APPLICATION	
LEGAL REPRESENTATIVE:	MYERS BIGEL SIBLEY & SAJOVEC, PO BOX 37428, RALEIGH, NC, 27627	

7-24-01

NUMBER OF CLAIMS: 8
EXEMPLARY CLAIM: 1
LINE COUNT: 1592

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

IT 502698-02-4P

(Polymer, resist material for patterning method)

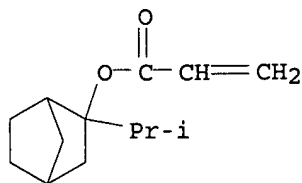
RN 502698-02-4 USPATFULL

CN 2-Propenoic acid, 2-methyl-, 3-hydroxytricyclo[3.3.1.1^{3,7}]dec-1-yl ester, polymer with 2-(1-methylethyl)bicyclo[2.2.1]hept-2-yl 2-propenoate (9CI)
(CA INDEX NAME)

CM 1

CRN 502698-01-3

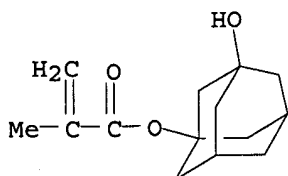
CMF C13 H20 O2



CM 2

CRN 115372-36-6

CMF C14 H20 O3



AB Provided are a **resist** material having markedly high resolution and etching resistance of a practically usable level, and being useful for fine microfabrication; a patterning method using the **resist** material; and a polymer useful as a base **resin** for the **resist** material. More specifically, provided are a polymer having a weight-average molecular weight of 1,000 to 500,000, which comprises one or more repeating units selected from the group consisting of repeating units represented by formulae (1) to (3) below; and one or more repeating units of the formula (4) below; and a **resist** material containing the polymer. ##STR1##

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

L10 ANSWER 3 OF 23 USPATFULL

ACCESSION NUMBER: 2003:78366 USPATFULL
 TITLE: Positive **resist** composition
 INVENTOR(S): Sato, Kenichiro, Shizuoka, JAPAN
 Uenishi, Kazuya, Shizuoka, JAPAN
 PATENT ASSIGNEE(S): FUJI PHOTO FILM CO., LTD. (non-U.S. corporation)

	NUMBER	KIND	DATE
PATENT INFORMATION:	US 2003054286	A1	20030320
APPLICATION INFO.:	US 2002-114985	A1	20020404 (10) 4/4/02

	NUMBER	DATE
PRIORITY INFORMATION:	JP 2001-107304	20010405
	JP 2001-107305	20010405
DOCUMENT TYPE:	Utility	
FILE SEGMENT:	APPLICATION	
LEGAL REPRESENTATIVE:	SUGHRUE MION, PLLC, 2100 Pennsylvania Avenue, NW, Washington, DC, 20037-3213	
NUMBER OF CLAIMS:	12	
EXEMPLARY CLAIM:	1	
LINE COUNT:	1447	

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

IT 348631-34-5

(chem. amplified pos. photoresists contg. two different polymers with alicyclic hydrocarbyl pendants)

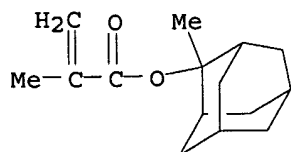
RN 348631-34-5 USPATFULL

CN 2-Propenoic acid, 2-methyl-, 3-hydroxytricyclo[3.3.1.1^{3,7}]dec-1-yl ester, polymer with 2-methyltricyclo[3.3.1.1^{3,7}]dec-2-yl 2-methyl-2-propenoate and tetrahydro-5-oxo-3-furanyl 2-methyl-2-propenoate (9CI) (CA INDEX NAME)

CM 1

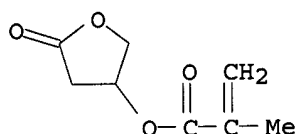
CRN 177080-67-0

CMF C15 H22 O2



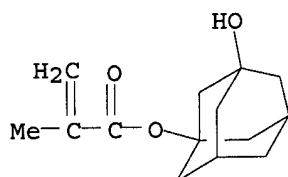
CM 2

CRN 130224-95-2
CMF C8 H10 O4



CM 3

CRN 115372-36-6
CMF C14 H20 O3



AB To provide a positive **resist** composition having high sensitivity, small defocus latitude depended on line pitch and less surface roughening at the etching, which can be suitably used for micro-photofabrication using far ultraviolet ray, particularly, ArF excimer laser ray.

A positive **resist** composition comprising (A) a **resin** containing specific two kinds of repeating units, which has an aliphatic cyclic hydrocarbon group on the side chain and increases the dissolution rate in an alkali developer under the action of an acid, and (B) a specific compound capable of generating an acid upon irradiation with actinic rays or radiation, or a positive **resist** composition comprising (A) two kinds of **resins** as the **resin** having an aliphatic cyclic hydrocarbon group on the side chain and capable of increasing the dissolution rate in an alkali developer under the action of an acid, and (B) a compound capable of generating an acid upon irradiation with actinic rays or radiation.

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

L10 ANSWER 4 OF 23 USPATFULL

ACCESSION NUMBER: 2003:13167 USPATFULL

TITLE: Negative **resist** composition, method for the formation of **resist** patterns and process for the production of electronic devices

INVENTOR(S): Nozaki, Koji, Kawasaki, JAPAN

Namiki, Takahisa, Kawasaki, JAPAN
Yano, Ei, Kawasaki, JAPAN
Kon, Junichi, Kawasaki, JAPAN
Kozawa, Miwa, Kawasaki, JAPAN
PATENT ASSIGNEE(S): Fujitsu Limited, Kawasaki, JAPAN (non-U.S. corporation)

	NUMBER	KIND	DATE
PATENT INFORMATION:	US 6506534	B1	20030114
APPLICATION INFO.:	US 2000-654433		20000901 (9)

✓
9-1-00

	NUMBER	DATE
PRIORITY INFORMATION:	JP 1999-248619	19990902
	JP 1999-260815	19990914
	JP 2000-61090	20000306
	JP 2000-61091	20000306
	JP 2000-257661	20000828

DOCUMENT TYPE: Utility
FILE SEGMENT: GRANTED
PRIMARY EXAMINER: Ashton, Rosemary
LEGAL REPRESENTATIVE: Armstrong, Westerman & Hattori, LLP
NUMBER OF CLAIMS: 11
EXEMPLARY CLAIM: 1
NUMBER OF DRAWINGS: 15 Drawing Figure(s); 5 Drawing Page(s)
LINE COUNT: 3370

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

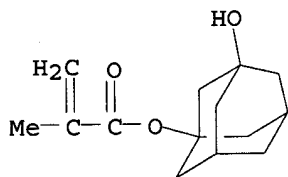
IT 288071-46-5P, 3-Hydroxy-1-adamantyl methacrylate-vinylphenol
copolymer 346618-97-1P
(resin in alkali-developable neg.-working chem. amplified resist
compn.)

RN 288071-46-5 USPATFULL

CN 2-Propenoic acid, 2-methyl-, 3-hydroxytricyclo[3.3.1.1^{3,7}]dec-1-yl ester,
polymer with ethenylphenol (9CI) (CA INDEX NAME)

CM 1

CRN 115372-36-6
CMF C14 H20 O3



CM 2

CRN 31257-96-2
CMF C8 H8 O
CCI IDS
CDES 8:ID



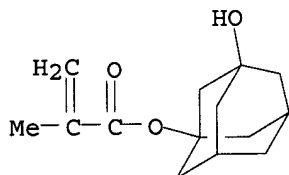
D1-OH

D1-CH=CH₂

RN 346618-97-1 USPATFULL
 CN 2-Propenoic acid, 2-methyl-, 3-hydroxytricyclo[3.3.1.1^{3,7}]dec-1-yl ester,
 polymer with 4-ethenylphenyl acetate (9CI) (CA INDEX NAME)

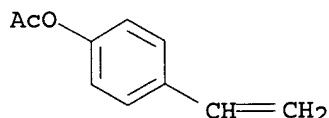
CM 1

CRN 115372-36-6
 CMF C14 H20 O3



CM 2

CRN 2628-16-2
 CMF C10 H10 O2



AB The negative **resist** composition comprises (1) a film-forming polymer which is itself soluble in basic aqueous solutions, and contains a first monomer unit with an alkali-soluble group in the molecule and a second monomer unit with an alcohol structure on the side chain which is capable of reacting with the alkali-soluble group, and (2) a photo **acid generator** which, when decomposed by absorption of image-forming radiation, is capable of generating an acid that can induce reaction between the alcohol structure of the second monomer unit and the alkali-soluble group of the first monomer unit, or protect the alkali-soluble group of the first monomer unit. The **resist** composition can form intricate negative **resist** patterns with practical sensitivity and no swelling.

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

L10 ANSWER 5 OF 23 CAPLUS COPYRIGHT 2003 ACS
 ACCESSION NUMBER: 2002:429451 CAPLUS
 DOCUMENT NUMBER: 137:26108

DUPLICATE 2

TITLE: Positive-working **photoresist** composition
 INVENTOR(S): Hada, Hideo; Fujimura, Satoshi; Sasaki, Kazuhito;
 Iwai, Takeshi
 PATENT ASSIGNEE(S): Japan
 SOURCE: U.S. Pat. Appl. Publ., 7 pp.
 CODEN: USXXCO
 DOCUMENT TYPE: Patent
 LANGUAGE: English
 FAMILY ACC. NUM. COUNT: 1
 PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
US 2002068238	A1	20020606	US 2001-996676	<u>20011130</u>
JP 2002169292	A2	20020614	JP 2000-369225	20001204
PRIORITY APPLN. INFO.:			JP 2000-369225	A 20001204

11-30-04

IT 348631-34-5

RL: TEM (Technical or engineered material use); USES (Uses)
 (resin; pos.-working **photoresist** compn. contg.)

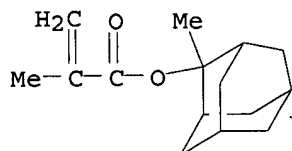
RN 348631-34-5 CAPLUS

CN 2-Propenoic acid, 2-methyl-, 3-hydroxytricyclo[3.3.1.1^{3,7}]dec-1-yl ester,
 polymer with 2-methyltricyclo[3.3.1.1^{3,7}]dec-2-yl 2-methyl-2-propenoate
 and tetrahydro-5-oxo-3-furanyl 2-methyl-2-propenoate (9CI) (CA INDEX
 NAME)

CM 1

CRN 177080-67-0

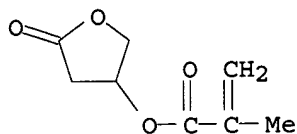
CMF C15 H22 O2



CM 2

CRN 130224-95-2

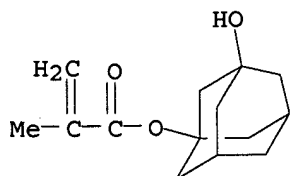
CMF C8 H10 O4



CM 3

CRN 115372-36-6

CMF C14 H20 O3



AB The invention discloses a pos.-working **photoresist** compn. suitable for patterning light-exposure with light having a wavelength of .ltoreq. 200 nm. The **photoresist** compn. comprises (1) a resinous compd. capable of being imparted with increased soly. in an aq. alk. soln. by interaction with an acid, (2) a radiation-sensitive **acid generating** compd. capable of generating an acid by irradi. with a radiation and (3) an org. solvent. The resinous compd. is a copolymer consisting of a combination of three types of specific (meth)acrylate units as the monomeric units. The patterned **resist** layer formed from the **photoresist** compn. has an advantage in respect of decreased line slimming caused by electron beam irradi. in SEM inspection.

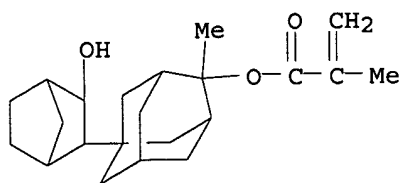
L10 ANSWER 6 OF 23 CAPLUS COPYRIGHT 2003 ACS DUPLICATE 3
 ACCESSION NUMBER: 2002:900853 CAPLUS
 DOCUMENT NUMBER: 138:18048
 TITLE: Polymers for **photoresists**, photosensitive compositions containing them, manufacture of semiconductors, and (meth)acrylic acid esters
 INVENTOR(S): Tsutsumi, Kiyoharu; Inoue, Keizo; Funaki, Katsunori; Nakano, Tatsuya; Horai, Akira
 PATENT ASSIGNEE(S): Daicel Chemical Industries, Ltd., Japan
 SOURCE: Jpn. Kokai Tokkyo Koho, 98 pp.
 CODEN: JKXXAF
 DOCUMENT TYPE: Patent
 LANGUAGE: Japanese
 FAMILY ACC. NUM. COUNT: 1
 PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 2002338627	A2	20021127	JP 2001-153173	20010522
PRIORITY APPLN. INFO.:			JP 2001-153173	20010522
OTHER SOURCE(S):		MARPAT 138:18048		

IT **477521-26-9P**
 RL: IMF (Industrial manufacture); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)
 (etching-resistant polymers of alicyclic group-contg. (meth)acrylic acid esters for **photoresists**)
 RN 477521-26-9 CAPLUS
 CN 2-Propenoic acid, 2-methyl-, hexahydro-2-oxo-3,5-methano-2H-cyclopenta[b]furan-6-yl ester, polymer with 5-(3-hydroxybicyclo[2.2.1]hept-2-yl)-2-methyltricyclo[3.3.1.1.3,7]dec-2-yl 2-methyl-2-propenoate and 3-hydroxytricyclo[3.3.1.1.3,7]dec-1-yl 2-methyl-2-propenoate (9CI) (CA INDEX NAME)

CM 1

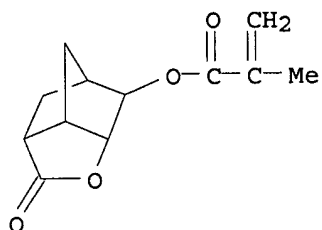
CRN 477521-25-8
 CMF C22 H32 O3



CM 2

CRN 254900-07-7

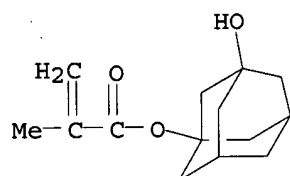
CMF C12 H14 O4



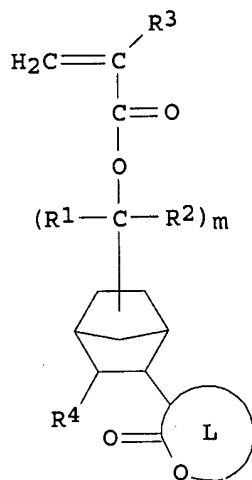
CM 3

CRN 115372-36-6

CMF C14 H20 O3



GI



I

AB The polymers contain .gtoreq.1 monomer units derived from (meth)acrylic acid esters $\text{CH}_2:\text{CRaC}(:\text{O})\text{O}(\text{CR1R2})\text{mXC}(:\text{O})(\text{CH}_2)\text{nY}$, $\text{CH}_2:\text{CRaC}(:\text{O})\text{OCR1}(\text{CH}_2)\text{n2Y2}(\text{CH}_2)\text{n1Y1}$, $\text{CH}_2:\text{CRaC}(:\text{O})\text{OCR1R2}(\text{CH}_2)\text{nY}$, $\text{CH}_2:\text{CRaC}(:\text{O})\text{OXCH}[(\text{CH}_2)\text{mCO2R3}]\text{CO2R3}$, I, $\text{CH}_2:\text{CRaC}(:\text{O})\text{O}(\text{CH}_2)\text{nXAY}$, and $\text{CH}_2:\text{CRaC}(:\text{O})\text{OCR1R2XAY}$ [Ra = H, Me; R1, R2 = H, C1-5 hydrocarbyl; R3 = (un)substituted tertiary hydrocarbyl, tetrahydropyranyl, tetrahydrofuranyl; R4 = H, C1-20 hydrocarbyl, (protected) OH or CH2OH; A = single bond, methylene, (hydroxy)ethylene; L = (un)substituted .gtoreq.5-membered lactone; X = (un)substituted alicyclic group; Y, Y1, Y2 = (un)substituted alicyclic group; m = 0, 1; n, n1, n2 = 0-2]. Semiconductors are manufd. by (1) applying the photosensitive compns. contg. the polymers and **photoacid generators** on substrates, (2) exposing the resulting films, and (3) developing to give patterns. The compns. show good etching resistance, high resolu., and good transparency.

L10 ANSWER 7 OF 23 CAPLUS COPYRIGHT 2003 ACS DUPLICATE 4
 ACCESSION NUMBER: 2002:792704 CAPLUS
 DOCUMENT NUMBER: 137:317917
 TITLE: Chemically amplified positive **photoresists** for microphtofabrication using deep UV aligners
 INVENTOR(S): Sato, Kenichiro; Uenishi, Kazuya
 PATENT ASSIGNEE(S): Fuji Photo Film Co., Ltd., Japan
 SOURCE: Jpn. Kokai Tokkyo Koho, 51 pp.
 CODEN: JKXXAF
 DOCUMENT TYPE: Patent
 LANGUAGE: Japanese
 FAMILY ACC. NUM. COUNT: 2
 PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 2002303978	A2	20021018	JP 2001-107305	20010405
US 2003054286	A1	20030320	US 2002-114985	20020404
PRIORITY APPLN. INFO.:			JP 2001-107304	A 20010405
			JP 2001-107305	A 20010405

IT 348631-34-5

RL: TEM (Technical or engineered material use); USES (Uses)
 (chem. amplified pos. **photoresists** contg. two different polymers with alicyclic hydrocarbyl pendants)

RN 348631-34-5 CAPLUS

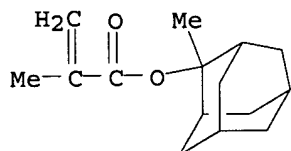
CN 2-Propenoic acid, 2-methyl-, 3-hydroxytricyclo[3.3.1.1^{3,7}]dec-1-yl ester,

polymer with 2-methyltricyclo[3.3.1.3^{1,7}]dec-2-yl 2-methyl-2-propenoate
and tetrahydro-5-oxo-3-furanyl 2-methyl-2-propenoate (9CI) (CA INDEX
NAME)

CM 1

CRN 177080-67-0

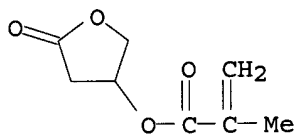
CMF C15 H22 O2



CM 2

CRN 130224-95-2

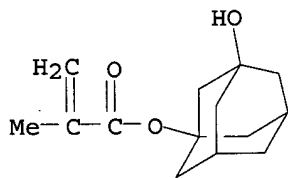
CMF C8 H10 O4



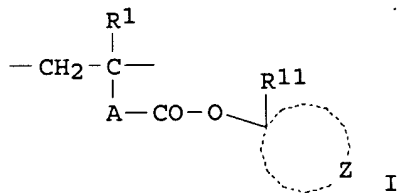
CM 3

CRN 115372-36-6

CMF C14 H20 O3



GI



AB The **photoresists**, showing less dependency of pattern sharpness
on d. and less surface roughening in etching, comprise (A) two kinds of
alicyclic hydrocarbyl-branched **resins** I and

[CH₂CR₁(ACO₂CR₁₂R₁₃R₁₄)] (R₁ = H, alkyl; A = bridging group; R₁₁ = C₁-4 alkyl; Z = alicyclic hydrocarbyl; R₁₂-14 = hydrocarbyl essentially including alicyclic one) and (B) radiation-sensitive acid generators.

L10 ANSWER 8 OF 23 USPATFULL

ACCESSION NUMBER: 2002:301718 USPATFULL

TITLE: Polymeric compound and resin composition for photoresist

INVENTOR(S): Funaki, Yoshinori, Himeji-shi, JAPAN
Tsutsumi, Kiyoharu, Himeji-shi, JAPAN
Takaragi, Akira, Himeji-shi, JAPAN

	NUMBER	KIND	DATE
PATENT INFORMATION:	US 2002169266	A1	20021114
	US 6552143	B2	20030422
APPLICATION INFO.:	US 2001-937910	A1	20011019
	WO 2001-JP515		20010126

(9) 10-19-01

	NUMBER	DATE
PRIORITY INFORMATION:	JP 2000-24527	20000201
DOCUMENT TYPE:	Utility	
FILE SEGMENT:	APPLICATION	
LEGAL REPRESENTATIVE:	BIRCH STEWART KOLASCH & BIRCH, PO BOX 747, FALLS CHURCH, VA, 22040-0747	

NUMBER OF CLAIMS: 5

EXEMPLARY CLAIM: 1

LINE COUNT: 3139

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

IT 353289-59-5P

(polymeric compd. for photoresist and resin compn. for photoresist)

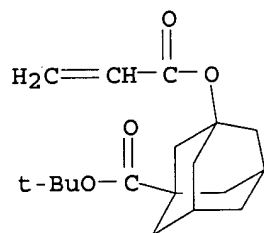
RN 353289-59-5 USPATFULL

CN Tricyclo[3.3.1.1^{3,7}]decane-1-carboxylic acid, 3-[(1-oxo-2-propenyl)oxy]-, 1,1-dimethylethyl ester, polymer with 2,5-furandione, 3-hydroxytricyclo[3.3.1.1^{3,7}]dec-1-yl 2-propenoate and 3a,4,7,7a-tetrahydro-4,7-methanoisobenzofuran-1(3H)-one (9CI) (CA INDEX NAME)

CM 1

CRN 251563-20-9

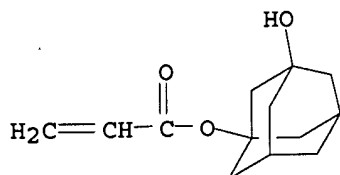
CMF C18 H26 O4



CM 2

CRN 216581-76-9

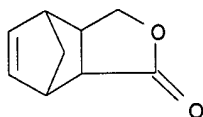
CMF C13 H18 O3



CM 3

CRN 85718-44-1

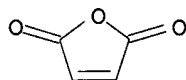
CMF C9 H10 O2



CM 4

CRN 108-31-6

CMF C4 H2 O3



AB A photoresist polymeric compound includes a monomer unit represented by following Formula (I): ##STR1##

The polymeric compound may further include at least one of monomer units represented by following Formulae (IIa) to ##STR2##

wherein R.sup.1, R.sup.13, R.sup.14 and R.sup.15 are each a hydrogen atom or methyl group; R.sup.2 and R.sup.3 are each a hydrocarbon group having from 1 to 8 carbon atoms; R.sup.4, R.sup.5 and R.sup.6 are each a hydrogen atom, hydroxyl group or a methyl group; R.sup.7 and R.sup.8 are each a hydrogen atom, hydroxyl group or --COOR.sup.9 group, where R.sup.9 is a t-butyl group, 2-tetrahydropyranyl group, etc.; R.sup.10 and R.sup.11 are each a hydrogen atom, hydroxyl group or oxo group; R.sup.12 is a hydrocarbon group having a tertiary carbon atom at a bonding site with an oxygen atom indicated in the formula; R.sup.16 is a t-butyl group, 2-tetrahydropyranyl group, etc.; and n denotes an integer from 1 to 3.

The photoresist polymeric compound can exhibit high adhesion to substrates and can highly precisely form fine patterns.

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

L10 ANSWER 9 OF 23 USPATFULL

ACCESSION NUMBER: 2002:297400 USPATFULL

TITLE: Positive photoresist composition for far ultraviolet exposure

INVENTOR(S): Sato, Kenichiro, Shizuoka, JAPAN
Kodama, Kunihiro, Shizuoka, JAPAN
Aoai, Toshiaki, Shizuoka, JAPAN

PATENT ASSIGNEE(S): Nakao, Hajime, Shizuoka, JAPAN
Fuji Photo Film Co., Ltd., Kanagawa, JAPAN (non-U.S. corporation)

	NUMBER	KIND	DATE
PATENT INFORMATION:	US 6479211	B1	20021112
APPLICATION INFO.:	US 2000-577884		20000525 (9)

	NUMBER	DATE
PRIORITY INFORMATION:	JP 1999-152860	19990531
	JP 1999-152861	19990531
	JP 1999-152862	19990531
	JP 1999-146774	19990526
	JP 1999-146775	19990526
	JP 1999-150215	19990528
	JP 1999-158693	19990604
	JP 1999-158695	19990604

DOCUMENT TYPE: Utility
FILE SEGMENT: GRANTED
PRIMARY EXAMINER: Chu, John S.
LEGAL REPRESENTATIVE: Sughrue Mion, PLLC
NUMBER OF CLAIMS: 24
EXEMPLARY CLAIM: 1
NUMBER OF DRAWINGS: 0 Drawing Figure(s); 0 Drawing Page(s)
LINE COUNT: 3224

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

IT 312616-52-7P 312616-53-8P

(far-UV pos.-working photoresist compn. from)

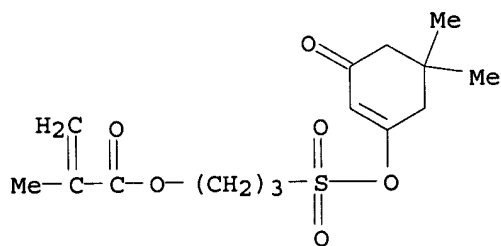
RN 312616-52-7 USPATFULL

CN 2-Propenoic acid, 2-methyl-, 3-[[[(5,5-dimethyl-3-oxo-1-cyclohexen-1-yl)oxy]sulfonyl]propyl ester, polymer with 3-hydroxytricyclo[3.3.1.1^{3,7}]dec-1-yl 2-methyl-2-propenoate and tetrahydro-4-methyl-2-oxo-2H-pyran-4-yl 2-methyl-2-propenoate (9CI) (CA INDEX NAME)

CM 1

CRN 289040-47-7

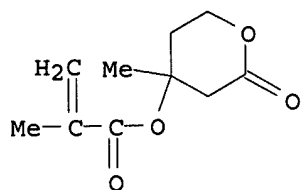
CMF C15 H22 O6 S



CM 2

CRN 177080-66-9

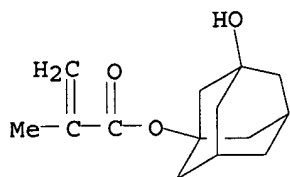
CMF C10 H14 O4



CM 3

CRN 115372-36-6

CMF C14 H20 O3



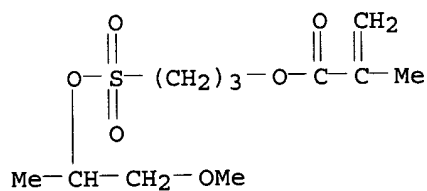
RN 312616-53-8 USPATFULL

CN 2-Propenoic acid, 2-methyl-, 3-hydroxytricyclo[3.3.1.1^{3,7}]dec-1-yl ester,
polymer with 3-[(2-methoxy-1-methylethoxy)sulfonyl]propyl
2-methyl-2-propenoate and tetrahydro-3-methyl-2-oxo-3-furanyl
2-methyl-2-propenoate (9CI) (CA INDEX NAME)

CM 1

CRN 221041-24-3

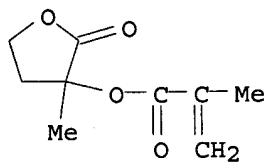
CMF C11 H20 O6 S



CM 2

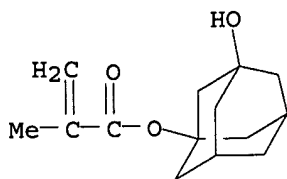
CRN 211802-06-1

CMF C9 H12 O4



CM 3

CRN 115372-36-6
CMF C14 H20 O3



AB A positive **photoresist** composition for far ultraviolet exposure is disclosed, comprising a compound capable of generating an acid upon irradiation with actinic rays or radiation and a **resin** having a repeating unit represented by formula (I) and being capable of decomposing under the action of an acid to increase the solubility in alkali. The positive **photoresist** composition of the present invention may further comprise a fluorine-containing and/or silicon-containing surfactant, an acid decomposable **resin**, a compound capable of decomposing under the action of an acid to generate a sulfonic acid, and/or a specific solvent, according to the objects.

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

L10 ANSWER 10 OF 23 USPATFULL

ACCESSION NUMBER: 2002:217000 USPATFULL

TITLE: Polymeric compound and **resin** composition for **photoresist**

INVENTOR(S): Ushirogouchi, Toru, Yokohama, JAPAN
Okino, Takeshi, Tokyo, JAPAN
Asakawa, Koji, Kawasaki, JAPAN
Shida, Naomi, Tokyo, JAPAN
Funaki, Yoshinori, Himeji, JAPAN
Tsutsumi, Kiyoharu, Himeji, JAPAN
Takaragi, Akira, Himeji, JAPAN
Inoue, Keizo, Himeji, JAPAN

PATENT ASSIGNEE(S): Kabushiki Kaisha Toshiba, Kanagawa-ken, JAPAN (non-U.S. corporation)
Daicel Chemical Industries, LTD, Osaka, JAPAN (non-U.S. corporation)

	NUMBER	KIND	DATE
PATENT INFORMATION:	US 6440636	B1	20020827
APPLICATION INFO.:	US 2000-703677		20001102 (9)
DOCUMENT TYPE:	Utility		
FILE SEGMENT:	GRANTED		
PRIMARY EXAMINER:	Ashton, Rosemary		
LEGAL REPRESENTATIVE:	Birch Stewart Kolasch & Birch LLP		
NUMBER OF CLAIMS:	7		
EXEMPLARY CLAIM:	1		
NUMBER OF DRAWINGS:	0 Drawing Figure(s); 0 Drawing Page(s)		
LINE COUNT:	1694		

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

IT 338790-63-9P

(polymeric compd. and resin compn. for photoresist)

RN 338790-63-9 USPATFULL

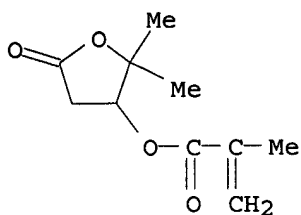
CN 2-Propenoic acid, 2-methyl-, 3-hydroxytricyclo[3.3.1.1^{3,7}]dec-1-yl ester, polymer with 1-methyl-1-tricyclo[3.3.1.1^{3,7}]dec-1-ylethyl 2-methyl-2-propenoate and tetrahydro-2,2-dimethyl-5-oxo-3-furanyl 2-methyl-2-propenoate (9CI) (CA INDEX NAME)

11-2-00

CM 1

CRN 324761-31-1

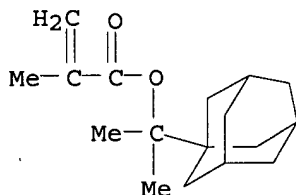
CMF C10 H14 O4



CM 2

CRN 279218-76-7

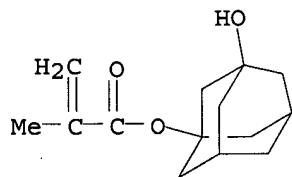
CMF C17 H26 O2



CM 3

CRN 115372-36-6

CMF C14 H20 O3



AB A polymeric compound includes at least one monomeric unit of the following formula (I): ##STR1##

wherein R.sup.1 is a hydrogen atom or a methyl group; and each of R.sup.2 and R.sup.3 is independently a hydrogen atom or a hydroxyl group. The polymeric compound may include the monomeric unit and at least one monomeric unit selected from monomeric units represented by the following formulae (IIa) and (IIb): ##STR2##

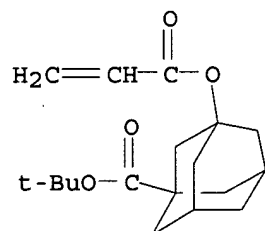
wherein R.sup.1 is a hydrogen atom or a methyl group; each of R.sup.4 and R.sup.5 is, for example, a hydrogen atom, a hydroxyl group, an oxo group, or a carboxyl group, wherein R.sup.4 and R.sup.5 are not concurrently hydrogen atoms; and each of R.sup.7 and R.sup.8 is independently a hydrogen atom, a hydroxyl group, or an oxo group. The polymeric compound have a high etching resistance in addition to satisfactory transparency, alkali-solubility, and adhesion.

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

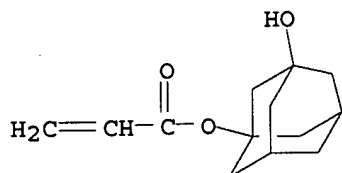
L10 ANSWER 11 OF 23 CAPLUS COPYRIGHT 2003 ACS DUPLICATE 5
ACCESSION NUMBER: 2001:582183 CAPLUS
DOCUMENT NUMBER: 135:160158
TITLE: Polymeric compound for **photoresist** and
resin composition for **photoresist**
INVENTOR(S): Funaki, Yoshinori; Tsutsumi, Kiyoharu; Takaragi, Akira
PATENT ASSIGNEE(S): Daicel Chemical Industries, Ltd., Japan
SOURCE: PCT Int. Appl., 120 pp.
CODEN: PIXXD2
DOCUMENT TYPE: Patent
LANGUAGE: Japanese
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2001057597	A1	20010809	WO 2001-JP515	20010126
W: KR, US				
RW: DE, FR, GB				
JP 2001215703	A2	20010810	JP 2000-24527	20000201
EP 1172694	A1	20020116	EP 2001-949041	20010126
R: DE, FR, GB				
US 2002169266	A1	20021114	US 2001-937910	20011019
PRIORITY APPLN. INFO.:				
			JP 2000-24527	A 20000201
			WO 2001-JP515	W 20010126

IT 353289-59-5P
RL: SPN (Synthetic preparation); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)
(polymeric compd. for **photoresist** and **resin** compn. for **photoresist**)
RN 353289-59-5 CAPLUS
CN Tricyclo[3.3.1.1^{3,7}]decane-1-carboxylic acid, 3-[(1-oxo-2-propenyl)oxy]-, 1,1-dimethylethyl ester, polymer with 2,5-furandione, 3-hydroxytricyclo[3.3.1.1^{3,7}]dec-1-yl 2-propenoate and 3a,4,7,7a-tetrahydro-4,7-methanoisobenzofuran-1(3H)-one (9CI) (CA INDEX NAME)
CM 1
CRN 251563-20-9
CMF C18 H26 O4



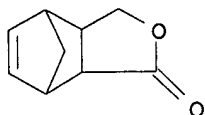
CM 2
CRN 216581-76-9
CMF C13 H18 O3



CM 3

CRN 85718-44-1

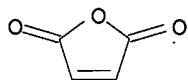
CMF C9 H10 O2



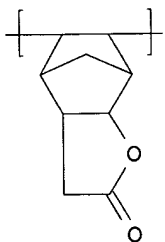
CM 4

CRN 108-31-6

CMF C4 H2 O3



GI



I

AB The invention relates to a polymeric compd. for **photoresists** which comprises monomer units represented by formula I; and a **resin** compn. for **photoresists** which comprises the polymeric compd. and a photo-acid generator. The compn., which contains 3-(hydroxymethyl)-2-Norbornanecarboxylic acid .gamma.-lactone based repeating unit, has high adhesion to substrates and can precisely form a fine pattern.

REFERENCE COUNT: 19 THERE ARE 19 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L10 ANSWER 12 OF 23 CAPLUS COPYRIGHT 2003 ACS

DUPLICATE 6

ACCESSION NUMBER: 2001:496390 CAPLUS

DOCUMENT NUMBER: 135:99843

TITLE: Radiation-sensitive polymer compositions with good dry etching resistance for semiconductor fabrication

INVENTOR(S): Ishii, Hiroyuki; Doki, Katsuji; Kajita, Toru;
 Shimokawa, Tsutomu
 PATENT ASSIGNEE(S): JSR Co., Ltd., Japan
 SOURCE: Jpn. Kokai Tokkyo Koho, 36 pp.
 CODEN: JKXXAF
 DOCUMENT TYPE: Patent
 LANGUAGE: Japanese
 FAMILY ACC. NUM. COUNT: 1
 PATENT INFORMATION:

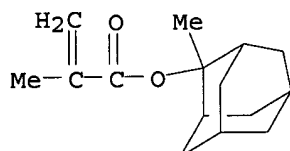
PATENT NO. KIND DATE APPLICATION NO. DATE

 JP 2001188347 A2 20010710 JP 2000-137757 20000510
 PRIORITY APPLN. INFO.: JP 1999-296028 A 19991018

IT 348631-34-5P
 RL: IMF (Industrial manufacture); TEM (Technical or engineered material
 use); PREP (Preparation); USES (Uses)
 (radiation-sensitive **resists** using alicyclic group-contg.
 acrylic polymers with good dry etching resistance)
 RN 348631-34-5 CAPLUS
 CN 2-Propenoic acid, 2-methyl-, 3-hydroxytricyclo[3.3.1.1^{3,7}]dec-1-yl ester,
 polymer with 2-methyltricyclo[3.3.1.1^{3,7}]dec-2-yl 2-methyl-2-propenoate
 and tetrahydro-5-oxo-3-furanyl 2-methyl-2-propenoate (9CI) (CA INDEX
 NAME)

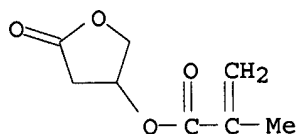
CM 1

CRN 177080-67-0
 CMF C15 H22 O2



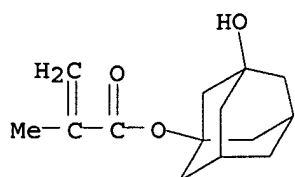
CM 2

CRN 130224-95-2
 CMF C8 H10 O4



CM 3

CRN 115372-36-6
 CMF C14 H20 O3



AB The compns. comprise (A) acid-dissocg. group-contg. alkali-insol. polymers having $CR1[C(:O)OAR2]CH2$ and $CR6[C(:O)OR7]CH2$ ($R1, R6 = H, C1-4$ alkyl, alkoxy, or hydroxyalkyl; $A =$ single bond, $C1-4$ alkylene; $R2 = R3X1, R4:X2, R5.tplbond.X3$; $R3-R5 = C4-20$ alicyclic group; $X1-X3 = O-$ or $N-$ contg. group; $R7 = C4-20$ alicyclic group, $CR83$; $R8 = C1-4$ alkyl or alicyclic group) and showing alkali. soly. by dissocn. of the acid-dissocg. groups and (B) **acid generators**. The compns. show good storage stability, high transparency for radiation, and high resolu.

L10 ANSWER 13 OF 23 CAPLUS COPYRIGHT 2003 ACS DUPLICATE 7

ACCESSION NUMBER: 2001:347119 CAPLUS

DOCUMENT NUMBER: 134:346475

TITLE: Adamantyl-containing polymer for **photoresist** and polymer composition for **photoresist**

INVENTOR(S): Gokochi, Toru; Okino, Takeshi; Asakawa, Koji; Shinoda, Naomi; Funaki, Katsunori; Tsutsumi, Kiyoharu; Horai, Akira; Inoue, Keizo

PATENT ASSIGNEE(S): Toshiba Corp., Japan; Daicel Chemical Industries, Ltd.

SOURCE: Jpn. Kokai Tokkyo Koho, 23 pp.

CODEN: JKXXAF

DOCUMENT TYPE: Patent

LANGUAGE: Japanese

FAMILY ACC. NUM. COUNT: 1

PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 2001131232	A2	20010515	JP 1999-312329	19991102
PRIORITY APPLN. INFO.:			JP 1999-312329	19991102

IT 338790-63-9P

RL: IMF (Industrial manufacture); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)

(adamantyl-contg. polymer for etching-resistant **photoresist** for semiconductor device fabrication)

RN 338790-63-9 CAPLUS

CN 2-Propenoic acid, 2-methyl-, 3-hydroxytricyclo[3.3.1.1^{3,7}]dec-1-yl ester, polymer with 1-methyl-1-tricyclo[3.3.1.1^{3,7}]dec-1-ylethyl 2-methyl-2-propenoate and tetrahydro-2,2-dimethyl-5-oxo-3-furanyl 2-methyl-2-propenoate (9CI) (CA INDEX NAME)

CM 1

CRN 324761-31-1

CMF C10 H14 O4

